

## **Cerebral Hemispheres and their Lobes**

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1. 4 lobes of the cerebrum
2. functions of frontal lobe
3. functions of parietal lobe
4. functions of temporal lobe
5. functions of occipital lobe
6. Broca's Area vs. Wernicke's Area
7. Memory locations
8. Types of Aphasia
9. Purpose of Corpus Callosum

## **Answers:**

### **Cerebral Hemispheres and their Lobes**

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1. 4 lobes of the cerebrum:  
**frontal, parietal, temporal, occipital**
2. functions of frontal lobe  
**motor cortex (located in precentral gyrus): controls voluntary motor output**  
**Speech output (located in the left hemisphere in Broca's Area)**  
**judgement, problem-solving, creativity, understanding consequences, memory, emotions**
3. functions of parietal lobe  
**somatosensory cortex (located in the postcentral gyrus): processes sense of touch**  
**tactile object recognition**  
**understanding language/choosing words (located in the left hemisphere in Wernicke's Area)**
4. functions of temporal lobe  
**memory (especially the hippocampus, which converts short-term memory to long-term memory)**  
**olfaction (often key in bringing back memories)**  
**hearing**  
**part of Wernicke's Area located in the temporal lobe**
5. functions of occipital lobe:  
**visual cortex**
6. Broca's Area vs. Wernicke's Area:  
**Broca's Area: Speech Output; Wernicke's Area: Vocabulary**
7. Memory locations:  
**frontal lobe for short-term memory; temporal lobe for converting short-term to long-term memory; but where are long-term memories stored? (we don't know for sure!)**
8. Types of Aphasia:  
**Global: not able to speak or understand**  
**Wernicke's: not able to understand easily**  
**Broca's: able to understand, but cannot speak clearly**
9. Purpose of Corpus Callosum:  
**This white matter connects the two sides of the cerebral hemispheres. On average, larger in females than males, larger in musicians than non-musicians, and larger in ambidextrous individuals.**